

PCT

REC'D 26 JUN 2001

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

## (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 00-002-PCT	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/JP00/01444	International filing date (day/month/year) 10/03/2000	Priority date (day/month/year) 15/03/1999	
International Patent Classification (IPC) or national classification and IPC C08K5/14			
<p>Applicant KAO CORPORATION et al.</p> <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <li>I <input checked="" type="checkbox"/> Basis of the report</li> <li>II <input type="checkbox"/> Priority</li> <li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>IV <input type="checkbox"/> Lack of unity of invention</li> <li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>VI <input type="checkbox"/> Certain documents cited</li> <li>VII <input type="checkbox"/> Certain defects in the international application</li> <li>VIII <input type="checkbox"/> Certain observations on the international application</li> </ul>			

Date of submission of the demand 08/09/2000	Date of completion of this report 22.06.2001
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	<p>Authorized officer Dury, O</p> <p>Telephone No. +49 89 2399 8313</p> 

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP00/01444

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-70 as originally filed

**Claims, No.:**

1-14 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP00/01444

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Statement

Novelty (N) Yes: Claims N yes: 1-14  
No: Claims

Inventive step (IS) Yes: Claims IS yes: 1-14  
No: Claims

Industrial applicability (IA) Yes: Claims IA yes: 1-14  
No: Claims

2. Citations and explanations  
**see separate sheet**

Concerning Paragraph V

1. **Relevant document:**

- D1: WO-A-99 51 696
- D2: EP-A-0 812 878
- D3: US-A-5 830 928
- D4: US-A-5 464 885

2. **Novelty: Art. 33(2) PCT**

2.1 D1 discloses dispersions of unsaturated polycondensation resin, oil-soluble initiators identical to those of the present application and opt. further ethylenically unsaturated monomers. The acid value of the resin disclosed in the examples is from 15-18 mg KOH/g. However, the initiators are added to the water dispersion for copolymerising ethylenically unsaturated monomers (D1: page 12, lines 1-13). This process is continued until these monomers are completely polymerised, i.e. until the initiators are consumed. D1, thus, does not disclose an aqueous dispersion comprising a polyester containing initiators. The subject matter on file is novel over D1.

2.2 D2 deals with heat curable compositions comprising an unsaturated polyester and an organic peroxide initiator according to the file. No water based composition is disclosed. D2 corresponds to the comparative examples on file.

2.3 D3 discloses waterborne emulsions comprising an unsaturated polycondensation resin and an oil soluble initiator according to the present application. The emulsion is obtained by mixing and high shear stress technique to produce latexes. The description of D3 does not disclose any acid value for the polycondensation resin. The acid values disclosed in the examples are lower than 3. Hence, novelty of the independent claims 1, 9, 13 and 14 on file is given.

The emulsions are used for the coating of textiles which exhibit improved water resistance, low VOC (different objective problem to be solved).

2.4 D4 discloses water based dispersions comprising an unsaturated polyester copolymer and an organic peroxide initiator. The initiators disclosed in D4 do

not correspond to those of the application. The preferred acid value of the polyesters according to D4 is 30-500, pref. 100-300 mg KOH/g. The examples on file deal with resins having an acid value smaller than 100. Hence, novelty is given.

**3. Inventive step: Art. 33(3) PCT**

D4 is the closest prior art since it also aims at providing waterborne dispersions comprising an unsaturated polyester copolymer and an organic peroxide initiator.

Starting from D4 the skilled person would find no hint to select the initiators on file. D4 would even prevent the skilled person from choosing resins having an acid value smaller than 100 mg KOH/g. Hence, the skilled person starting from D4 would have no motivation to choose an initiator and a polyester according to the present application in order to provide further water based compositions based on an unsaturated polyester copolymer exhibiting good curing properties and low emission of odours.

In addition, the Applicant has shown the improved performance of the compositions of the application as compared to the non water based compositions according to e.g. D2 (see Tables on file).

**4. The subject matter of claims 1-14 is industrially applicable.**

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

Date of mailing (day/month/year)  
06 October 2000 (06.10.00)

To:  
Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C.20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

International application No.  
PCT/JP00/01444

Applicant's or agent's file reference  
00-002-PCT

International filing date (day/month/year)  
10 March 2000 (10.03.00)

Priority date (day/month/year)  
15 March 1999 (15.03.99)

## Applicant

SAKUMA, Tadashi et al

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

08 September 2000 (08.09.00)

in a notice effecting later election filed with the International Bureau on:

\_\_\_\_\_

2. The election  was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Diana Nissen

Telephone No.: (41-22) 338.83.38

## INTERNATIONAL SEARCH REPORT

In. Application No  
PCT/JP 00/01444

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08K5/14 C08K5/23 C08G63/91 C08F283/01 C08F299/04  
C08L67/06 C08L77/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C08K C08G C08F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 99 51696 A (BRADLEY CHRISTOPHER ; BELTON MARTIN (GB); ICI PLC (GB); HOWARD DEBO) 14 October 1999 (1999-10-14) abstract; claim 1 page 11, line 23 -page 12, line 15; examples 1-3 ---	1-5
A	EP 0 812 878 A (WITCO CORP) 17 December 1997 (1997-12-17) abstract; claim 1 --- -/-	1-14

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

13 June 2000

Date of mailing of the international search report

03/07/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl  
Fax: (+31-70) 340-3016

Authorized officer

Dury, O

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/JP 00/01444

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 830 928 A (MARTIN ROXALANA L ET AL) 3 November 1998 (1998-11-03) abstract column 5, line 1 - line 28 <del>column 6, line 24 - line 28</del> column 8, line 5 - line 15 column 10, line 63 -column 11, line 12. column 13, line 39 - line 48; claims 1,6 -----	1-14
A	US 5 464 885 A (CRAUN GARY P) <del>7 November 1995 (1995-11-07)</del> column 4, line 64 -column 5, line 3 column 7, line 17 - line 22; claim 1; examples 1,2 -----	1-14

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/JP 00/01444

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9951696	A 14-10-1999	AU 3704899	A	25-10-1999
EP 0812878	A 17-12-1997	AU 2483797	A	18-12-1997
		BR 9703552	A	10-11-1998
		CA 2207365	A	14-12-1997
		JP 10060062	A	03-03-1998
US 5830928	A 03-11-1998	US 5972809	A	26-10-1999
		WO 9730097	A	21-08-1997
US 5464885	A 07-11-1995	NONE		

## PENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>00-002-PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/JP 00/ 01444</b>	International filing date (day/month/year) <b>10/03/2000</b>	(Earliest) Priority Date (day/month/year) <b>15/03/1999</b>
Applicant <b>KAO CORPORATION et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of **3** sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
- 2.  **Certain claims were found unsearchable** (See Box I).
- 3.  **Unity of Invention is lacking** (see Box II).
- 4. With regard to the **title**,
  - the text is approved as submitted by the applicant.
  - the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

**None of the figures.**

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For r

g Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum)

00-002-PCT

Box No. I TITLE OF INVENTION

WATER-BASED RESIN COMPOSITION

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

Kao Corporation

14-10, Nihonbashi Kayabacho 1-chome,  
Chuo-ku, Tokyo 103-8210 Japan

This person is also inventor.

Telephone No.

Faximile No.

Teleprinter No.

State (that is, country) of nationality:

Japan

State (that is, country) of residence:

Japan

This person is applicant  
for the purposes of:

all designated  
States

all designated States except  
the United States of America

the United States  
of America only

the States indicated in  
the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

SAKUMA Tadashi

c/o Kao Corporation, Research Laboratories,  
1334, Minato, Wakayama-shi, Wakayama 640-8580 Japan

This person is:

applicant only

applicant and inventor

inventor only (If this check-box  
is marked, do not fill in below.)

State (that is, country) of nationality:

Japan

State (that is, country) of residence:

Japan

This person is applicant  
for the purposes of:

all designated  
States

all designated States except  
the United States of America

the United States  
of America only

the States indicated in  
the Supplemental Box

Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf  
of the applicant(s) before the competent International Authorities as:

agent

common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

9583 Patent Attorney HOSODA Yoshinori

c/o Hosoda International Patent Office

Otemae M2 Bldg., 8-1, Tanimachi 2-chome,  
Chuo-ku, Osaka-shi, Osaka 540-0012 Japan

Telephone No.

06-6910-6733

Faximile No.

06-6910-6735

Teleprinter No.

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

KAWABE Kuniyasu

c/o Kao Corporation, Research Laboratories,  
1334, Minato, Wakayama-shi, Wakayama 640-8580 Japan

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: Japan

State (that is, country) of residence: Japan

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on another continuation sheet.

## Box No. V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

## Regional Patent

AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT

EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT

EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT

OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....

National Patent (if other kind of protection or treatment desired, specify on dotted line):

<input type="checkbox"/> AE United Arab Emirates .....	<input type="checkbox"/> LR Liberia .....
<input type="checkbox"/> AL Albania .....	<input type="checkbox"/> LS Lesotho .....
<input type="checkbox"/> AM Armenia .....	<input type="checkbox"/> LT Lithuania .....
<input type="checkbox"/> AT Austria .....	<input type="checkbox"/> LU Luxembourg .....
<input type="checkbox"/> AU Australia .....	<input type="checkbox"/> LV Latvia .....
<input type="checkbox"/> AZ Azerbaijan .....	<input type="checkbox"/> MD Republic of Moldova .....
<input type="checkbox"/> BA Bosnia and Herzegovina .....	<input type="checkbox"/> MG Madagascar .....
<input type="checkbox"/> BB Barbados .....	<input type="checkbox"/> MK The former Yugoslav Republic of Macedonia .....
<input type="checkbox"/> BG Bulgaria .....	<input type="checkbox"/> MN Mongolia .....
<input type="checkbox"/> BR Brazil .....	<input type="checkbox"/> MW Malawi .....
<input type="checkbox"/> BY Belarus .....	<input type="checkbox"/> MX Mexico .....
<input type="checkbox"/> CA Canada .....	<input type="checkbox"/> NO Norway .....
<input type="checkbox"/> CH and LI Switzerland and Liechtenstein .....	<input type="checkbox"/> NZ New Zealand .....
<input checked="" type="checkbox"/> CN China .....	<input type="checkbox"/> PL Poland .....
<input type="checkbox"/> CU Cuba .....	<input type="checkbox"/> PT Portugal .....
<input type="checkbox"/> CZ Czech Republic .....	<input type="checkbox"/> RO Romania .....
<input type="checkbox"/> DE Germany .....	<input type="checkbox"/> RU Russian Federation .....
<input type="checkbox"/> DK Denmark .....	<input type="checkbox"/> SD Sudan .....
<input type="checkbox"/> EE Estonia .....	<input type="checkbox"/> SE Sweden .....
<input type="checkbox"/> ES Spain .....	<input type="checkbox"/> SG Singapore .....
<input type="checkbox"/> FI Finland .....	<input type="checkbox"/> SI Slovenia .....
<input type="checkbox"/> GB United Kingdom .....	<input type="checkbox"/> SK Slovakia .....
<input type="checkbox"/> GD Grenada .....	<input type="checkbox"/> SL Sierra Leone .....
<input type="checkbox"/> GE Georgia .....	<input type="checkbox"/> TJ Tajikistan .....
<input type="checkbox"/> GH Ghana .....	<input type="checkbox"/> TM Turkmenistan .....
<input type="checkbox"/> GM Gambia .....	<input type="checkbox"/> TR Turkey .....
<input type="checkbox"/> HR Croatia .....	<input type="checkbox"/> TT Trinidad and Tobago .....
<input type="checkbox"/> HU Hungary .....	<input type="checkbox"/> UA Ukraine .....
<input type="checkbox"/> ID Indonesia .....	<input type="checkbox"/> UG Uganda .....
<input type="checkbox"/> IL Israel .....	<input checked="" type="checkbox"/> US United States of America .....
<input type="checkbox"/> IN India .....	<input type="checkbox"/> UZ Uzbekistan .....
<input type="checkbox"/> IS Iceland .....	<input type="checkbox"/> VN Viet Nam .....
<input type="checkbox"/> JP Japan .....	<input type="checkbox"/> YU Yugoslavia .....
<input type="checkbox"/> KE Kenya .....	<input type="checkbox"/> ZA South Africa .....
<input type="checkbox"/> KG Kyrgyzstan .....	<input type="checkbox"/> ZW Zimbabwe .....
<input type="checkbox"/> KP Democratic People's Republic of Korea .....	
<input type="checkbox"/> KR Republic of Korea .....	
<input type="checkbox"/> KZ Kazakhstan .....	
<input type="checkbox"/> LC Saint Lucia .....	
<input type="checkbox"/> LK Sri Lanka .....	

Check-boxes reserved for designating States which have become party to the PCT after issuance of this sheet:

.....

.....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

## Box No. VI PRIORITY CLAIM

 Further priority claims are indicated in the Supplemental Box.

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 15.03.99	Patent Application 11-68644	Japan		
item (2) 02.08.99	Patent Application 11-218913	Japan		
item (3) 13.09.99	Patent Application 11-259470	Japan		

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1), (2), (3)

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / EP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year) Number Country (or regional Office)

## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request	:	4
description (excluding sequence listing part)	:	70
claims	:	5
abstract	:	1
drawings	:	0
sequence listing part of description	:	0
Total number of sheets	:	80

This international application is accompanied by the item(s) marked below:

1.  fee calculation sheet
2.  separate signed power of attorney
3.  copy of general power of attorney; reference number, if any
4.  statement explaining lack of signature
5.  priority document(s) identified in Box No. VI as item(s):
6.  translation of international application into (language):
7.  separate indications concerning deposited microorganism or other biological material
8.  nucleotide and/or amino acid sequence listing in computer readable form
9.  other (specify):

Figure of the drawings which should accompany the abstract:

Language of filing of the international application: English

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

HOSODA Yoshinori

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1. Date of actual receipt of the purported international application:	2. Drawings:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	<input type="checkbox"/> received: <input type="checkbox"/> not received:
4. Date of timely receipt of the required corrections under PCT Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.

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See Notes to the request form